IN THE SPECIFICATION

Page 4, lines 11 - 19:

Conventional GFCI devices may utilize a user load such as a face receptacle. Typically GFCIs are four terminal devices, two phase or AC leads for connection to AC electrical power and two LOAD leads for connection to downstream devices. If a conventional GFCI is properly wired, the GFCI provides ground fault protection for devices downstream and the incorporated receptacle. However, if a conventional GFCI is reverse wired, unprotected power is provided to the receptacle face at all times. For example, when a conventional GFCI is reverse wired, the face receptacle is "upstream" from the current imbalance sensor coil and the circuit interrupting portion. Accordingly, if the conventional GFCI is in either the tripped or normal state, the face receptacle is ~~provide~~ provided with unprotected power.

Page 6, line 26 to Page 7, line 4:

One embodiment for the circuit interrupting portion uses an electro-mechanical circuit interrupter to cause electrical discontinuity in the phase and neutral conductive paths, and sensing circuitry to sense the occurrence of the predetermined condition. For example, the electro-mechanical circuit interrupter ~~include~~ includes a coil assembly, a movable plunger attached to the coil assembly and a banger attached to the plunger. The movable plunger is responsive to energizing of the coil assembly, and movement of the plunger is translated to movement of said banger. Movement of the banger causes the electrical discontinuity in the phase and/or neutral conductive paths.

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To reset the GFCI receptacle so that contacts 52 and 56 are closed and continuity in the phase conductive path is reestablished, the reset button 30 is depressed sufficiently to overcome the bias force of return spring 120 and move the latch member 100 in the direction of arrow A, seen in Fig. 8. While the reset button 30 is being depressed, latch finger 102 contacts side L of the movable contact arm 50 and continued depression of the

reset button 30 forces the latch member to overcome the stress force exerted by the arm 50 causing the reset contact 104 on the arm 50 to close on reset contact 106. Closing the reset contacts activates the operation of the circuit interrupter by, for example simulating a fault, so that plunger 92 moves the banger 94 upwardly striking the latch member 100 which pivots the latch finger 102, while the latch member 100 continues to move in the direction of arrow A. As a result, the latch finger 102 is lifted over side L of the remote end 116 of the movable contact arm 50 onto side R of the remote end of the movable contact arm, as seen in Figs. 7 and 11. Contact arm 50 returns to its unstressed position, opening contacts ~~52 and 56 and contacts 62 and 66~~104 and 106, so as to terminate the activation of the circuit interrupting portion, thereby de-energizing the coil assembly 90.

After the circuit interrupter operation is activated, the coil assembly 90 is de-energized so that so that plunger 92 returns to its original extended position, and banger 94 releases the latch member 100 so that the latch finger 102 is in a reset position, seen ~~d~~in Fig. 9. Release of the reset button causes the latching member 100 and movable contact arm 50 to move in the direction of arrow B (seen in Fig. 9) until contact 52 electrically engages contact 56, as seen in Fig. 2.

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Referring to FIGS. 23a-b, portions of a circuit interrupting device is shown (GFCI 400). The device is properly wired in FIG. 23a and reverse wired in FIG. 23b. Predetermined condition sensor 410 will open switch devices 412, 414 in order to isolate the line Phase 402 and Neutral 406 from the Load, 404 and 408 respectively. As can be appreciated, when the device is reverse wired as shown in FIG. 23b,~~the user load, receptacle 420 is protected by the sensor 410 when the switch devices are tripped~~ and the switch devices are tripped, the receptacle 420 loses power but the devices are not protected from the predetermined condition because they are "upstream" of the sensor 410. As can be appreciated, if the device does not include a reset lock out, it may be reset, even though it is reverse wired. As shown in FIG. 5 also, a two contact switch 414 may be utilized to separately break the line connection 402, 406 from the load side 404, 408 And a user load 420. Such a configuration can be considered to be a bridge circuit, as

shown in FIG. 24a, the configuration may include conductors crossing over in a bridge configuration.

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Referring to FIGS. 24a-b, the GFCI is properly wired in FIG. 24a and reverse wired in FIG. 24b. Predetermined condition sensor 410 will open switch devices 412, 414 in order to isolate the line Phase 402 and Neutral 406 from the Load, 404 and 408 respectively. As can be appreciated, when the device is reverse wired as shown in FIG. 24b, ~~the user load, receptacle 420 is protected by the sensor 410 when the switch devices are tripped~~ and the switch devices are tripped, the receptacle 420 loses power but the devices are not protected from the predetermined condition because they are "upstream" of the sensor 410. If the device does include a reset lock out, it may not be reset, even though it is reverse wired. The reset lock out will test the device by moving contact 414 to 422 along A-B such that a circuit through current limiting resistor 424 is established and picked up by sensor 410, preferably a toroid coil. Because a two contact switch 414 is utilized to separately break the line connection 402, 406 from the load side 404, 408 and a user load 420, when reverse wired as in FIG. 24b, the reset lockout test across resistor 424 will not work because the power from the line is isolated by switch 414.

Page 23, line 27 to Page 24, line 9:

Referring to FIG. 28a, a method of preparing a circuit interrupting device is provided. As shown, a circuit interrupting device is manufactured, step 510 such that the circuit interrupting device is manufactured in a reset lock out state, step 520. The device manufacture is completed, step 522. Optionally, the reset button is tested when the device is not powered to ensure that reset is not possible, step 524. Thereafter, the device~~, step~~ 400~~,~~ may be placed in the stream of commerce, step 526.

Referring to Fig. 28b, a method of preparing a circuit interrupting device having a manual trip 530 is provided. As shown, a circuit interrupting device may be manufactured, step 531, such that the circuit interrupting device is manufactured in a reset lock out state, step 534. ~~The device manufacture is completed, step 538.~~ Optionally,

the ~~reset button is~~ device is manually tested, step 536, when the device is not powered to ensure that reset is not possible~~, step 536~~. Thereafter, the device 400 may be placed in the stream of commerce, step ~~526~~ 538.

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As shown in Fig. ~~29~~27, a circuit interrupting device such as GFCI 400 may be connected to a test power supply 490 in order to preset the GFCI into a reset lock out state before shipping it to users. A method of ensuring that the device is shipped in the reset lock out state is illustrated in the flow chart of Fig. 28c. During manufacture, step 541, of the device, a test button is provided, step 542. After manufacture, a power source 490 is connected to the device, step 544. The trip test is activated to trip the device, thereby setting a reset lock out state, step 546. Thereafter the device may be placed in the stream of commerce, step 548.

Page 25, lines 21 - 28:

Referring to FIG. 30, 31, 32, each time a user inserts a plug having plug blades 711 into the receptacle face of a GFCI, a mechanical mechanism within the GFCI causes it to trip. In operation, user plug blade 711 engages trigger arm 720, that is biased by spring 725. As the trigger arm 720 is depressed and travels in direction A, sliding plate 730 is urged by projection 732 on arm 720 to first move in direction D to cause the GFCI to trip. The GFCI is mechanically tripped and will not supply power to the user load until the rest lockout mechanism is reset. As can be appreciated, the user receptacle should exert enough force to hold plug 711 in place despite the force exerted by bias spring 725.

Page 26, lines 7 - 14:

Fig. 31 illustrates the relationship and position of the trigger arm, projection on the trigger arm and sliding arm when a plug is in a socket; and Fig. 32 illustrates this relationship when a plug is removed from the receptacle of a GFCI. It is to be noted that, see Fig. 31, when a plug is inserted into a GFCI, the receptacle will trip the GFCI mechanically. In Fig. 32, as the plug is removed it will again trip the GFCI mechanically, but the GFCI will remain in its ~~trigged~~ tripped state until a plug is again inserted into the

GFCI because the reset button is prevented from being depressed by the stop member 740 being positioned on top of the ~~clearance opening 742 in~~ plate 730.

Page 27, lines 1 - 13:

With reference to FIG. 33, another embodiment of the present invention is shown. An automatic test GFCI device 810 is shown that is configured to automatically test itself when a user load is accessed. A user load activated spring and switch such as shown in FIG. 31a will execute a trip and reset that will be locked out if the device is non-operational, in an open neutral state or reverse wired. When the user plug 711 is removed, the device may again be tripped. As can be appreciated, for a duplex user receptacle such as that of device 810, the first plug inserted may execute the test and reset, while the last plug removed may trip the device into a standby tripped state.

With reference to ~~FIG. 34~~ FIGS. 34a-f, there is shown another embodiment of the present invention ~~is shown~~. An automatic test GFCI device ~~910~~ is shown that is similar to the device ~~810~~ shown in FIGS 31 and 32, except that the user load switch activation mechanism is activated by pressure on a face plate ~~916~~ 720 that is biased to an outward position and forced in when a user plug is inserted. ~~Figs 34a-34b and~~ FIGS. 35a-35f ~~illustrate~~ show latch plate-reset pin relationships for two embodiments.